California ISO

California Independent System Operator Corporation

February 9, 2024

The Honorable Debbie-Anne Reese
Acting Secretary
Federal Energy Regulatory Commission
888 First Street, NE
Washington, DC 20426

Re: California Independent System Operator Corporation
Docket No. ER24-____-000

Tariff Amendment to Update the Capacity Procurement Mechanism Soft Offer Cap

Dear Secretary Reese:

The California Independent System Operator Corporation (CAISO) submits this tariff amendment to propose a straightforward update to the level of the capacity procurement mechanism (CPM) soft offer cap.[1] The CAISO is obligated by its tariff to periodically review how the CPM soft offer cap aligns with new cost studies. Based on that review, the CAISO proposes to increase the CPM soft offer cap from $6.31/kw-month to $7.34/kw-month. The higher cap will better reflect inflation, labor rates, and higher bilateral capacity prices in recent years. The proposed tariff revisions will better position the CAISO to maintain reliable grid operations this summer and beyond by creating greater incentives for resources to accept voluntary CPM designations.

It is important the CAISO implement the proposed tariff revisions by the start of summer 2024. Accordingly, the CAISO respectfully requests the Commission issue an order by May 1, 2024, accepting the proposed tariff

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[1] The CAISO submits this filing pursuant to section 205 of the Federal Power Act (FPA), 16 U.S.C. § 824d. Capitalized terms not otherwise defined herein have the meanings set forth in the CAISO tariff, and references herein to specific sections, articles, and appendices are references to sections, articles, and appendices in the current CAISO tariff and as revised or proposed in this filing, unless otherwise indicated.

See CAISO Final Proposal on Capacity Procurement Mechanism Enhancements, *available at* https://www.caiso.com/InitiativeDocuments/Final-Proposal-Capacity-Procurement-Mechanism-Track2-Aug172023.pdf.

revisions to be effective in early June 2024. The CAISO intends to implement these tariff revisions by June 1, 2024. The CAISO requests authorization to notify the Commission of the effective date of the tariff changes within five days of implementation.[2]

I. Background

A. The Role of CPM Under the CAISO Tariff

The CAISO tariff includes resource adequacy (RA) provisions to ensure sufficient resources are available when and where needed to serve load, meet reserve requirements, and support reliable operation of the CAISO controlled grid.[3] There nevertheless may be circumstances in which the RA capacity shown by load-serving entities is inadequate or insufficient to fulfill the CAISO's operational needs and enable it to meet reliability criteria.[4] The CAISO tariff provides the CAISO with authority to designate backstop capacity to meet reliability needs under its CPM and reliability must-run (RMR) mechanisms.

CPM is the mechanism for procuring backstop capacity if load-serving entities are deficient in meeting their RA requirements or when RA capacity cannot meet an unforeseen, immediate, or impending reliability need. The effective CPM provisions are in section 43A of the CAISO tariff.[5] The CPM allows the CAISO to select bids voluntarily submitted by scheduling coordinators for generation resources in a competitive solicitation "to procure capacity to address a deficiency or supplement resource adequacy procurement by load-

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[2] The CAISO has included an effective date of 12/31/9998 as part of the tariff records submitted in this filing. The CAISO will notify the Commission of the actual effective date of these tariff records within five business days of implementation in an eTariff submittal using Type of Filing code 150 – Report. *See Cal. Indep. Sys. Operator Corp.,* 172 FERC ¶ 61,263 (2020).

[3] Tariff section 40, et seq.

[4] After the monthly and annual RA showings, the CAISO notifies deficient load serving entities and provides them with an opportunity to cure their deficiencies.

[5] The currently effective CPM provisions in Section 43A apply to all designations of Eligible Capacity to provide CPM Capacity services under the CPM that commence on or after November 1, 2016. Section 43 applied to all designations of Eligible Capacity to provide CPM Capacity services under the CPM that commenced prior to November 1, 2016. The previously effective CPM provisions, first approved in 2011, replaced the Interim Capacity Procurement Mechanism (ICPM) formerly found in tariff section 43. *See Cal. Indep. Sys. Operator Corp.,* 134 FERC ¶ 61,211 (2011) (order conditionally accepting tariff provisions included in the previous CPM) (2011 CPM Order), order approving uncontested settlement, 138 FERC ¶ 61,112 (2012) (2012 CPM Order); *Cal. Indep. Sys. Operator Corp.,* 153 FERC ¶ 61,001 (2015) (order accepting tariff provisions included in the currently effective CPM for bids below the soft offer cap) (2015 CPM Order), order granting clarification, 154 FERC ¶ 61,034 (2016). The Commission accepted the currently effective CPM tariff provisions for bids above the soft offer cap in a letter order issued in Docket No. ER20-1075 on July 11, 2022.

serving entities, as needed, to maintain grid reliability."[6] The CAISO may designate capacity under the CPM only to address one of these specified circumstances:

(1) Insufficient local capacity area resources in an annual or monthly RA plan;[7]

(2) Collective deficiency in local capacity area resources;[8]

(3) Insufficient RA resources in a load-serving entity's annual or monthly RA plan;[9]

(4) A CPM significant event;[10]

(5) A reliability or operational need for an exceptional dispatch CPM;[11] and

(6) A cumulative deficiency in the total flexible RA capacity in the annual or monthly flexible RA capacity plans, or in a flexible capacity category in the monthly flexible RA capacity plans.[12]

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6 2015 CPM Order at P 2.

7 Tariff sections 43A.2.1.1 and 43A.2.1.2, respectively.

8 Tariff section 43A.2.2.

9 Tariff section 43A.2.3.

10 Tariff section 43A.2.4. As defined in the CAISO tariff, a Significant Event is a "substantial event, or a combination of events, that is determined by the CAISO to either result in a material difference from what was assumed in the resource adequacy program for purposes of determining the Resource Adequacy Capacity requirements, or produce a material change in system conditions or in CAISO Controlled Grid operations, that causes, or threatens to cause, a failure to meet Reliability Criteria absent the recurring use of a non-Resource Adequacy Resource(s) on a prospective basis." Tariff appendix A (definition of "CPM Significant Event").

11 Tariff section 43A.2.5. An Exceptional Dispatch CPM Non-System Reliability Need is the "existence of a reliability issue where resolution depends on a resource in a specific geographic area within the CAISO Balancing Authority, which may include, but is not limited to, a local reliability area, zone, or region." Tariff appendix A (definition of "Exceptional Dispatch CPM Non-System Reliability Need"). An Exceptional Dispatch CPM System Reliability Need is the "existence of a reliability issue where resolution does not require a resource to be in a specific geographic area within the CAISO Balancing Authority Area, which may include, but is not limited to, a forced outage of a major transmission line or a forced outage of a large generating unit." Tariff appendix A (definitions of "Exceptional Dispatch CPM System Reliability Need"). To be eligible for an Exceptional Dispatch CPM, capacity cannot be RA, and cannot be the subject of a self-schedule or market-based commitment during the time covered by the Exceptional Dispatch. Tariff section 43A.2.5.2.1.

12 Tariff section 43A.2.7.

A resource designated under the CPM is treated like an RA resource, and has the same must-offer obligations to bid into the CAISO markets.[13] However, CPM participation is voluntary: the CAISO does not require resources to submit bids into a CPM competitive solicitation. But if a resource does submit a bid, and the CAISO accepts the bid, the resource must accept the CPM designation. If a resource does not submit a bid into a CPM competitive solicitation, and the CAISO offers the resource a CPM designation, the resource may decline the CPM designation.[14]

B. CPM Soft Offer Cap

There are two options for a resource submitting CPM offers into a CPM competitive solicitation process to receive compensation. The first option is for the resource to receive compensation based on its offer (i.e., bid) of capacity into the competitive solicitation at a price at or below the CPM soft offer cap, which is set at $6.31/kW-month ($75.68/kW-year).[15] The second option is for the CPM resource to offer capacity into the competitive solicitation at a price above the CPM soft offer cap and to cost-justify that offer by making a filing with the Commission based on the resource's going-forward fixed costs, using the same cost categories used to establish the CPM soft offer cap.[16]

The CPM soft offer cap provides an opportunity for resources to recover their costs while also mitigating market power. The CPM soft offer cap is based on three going-forward fixed cost components (*i.e.,* fixed operations and maintenance costs, ad valorem taxes, and insurance costs) of a merchant-constructed, mid-cost, 550 MW combined cycle resource with duct firing (the "reference resource"), plus a 20 percent adder to that cost total.[17] The costs of

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[13] Tariff section 43A.5.1.

[14] Tariff sections 43A.5.1 – 43A.5.2. If capacity that was not offered into the Intra-monthly Competitive Solicitation Process (CSP) is offered an Exceptional Dispatch CPM designation and declines the designation, then the resource will be compensated based on supplemental revenues under Tariff sections 39.10 and 11.5.6.7. This essentially allows the resource to be paid, during the period it otherwise would have been designated as CPM, the higher of its energy bid price or the LMP, even if it otherwise would be subject to mitigation measures. In other words, the resource would not be mitigated for an exceptional dispatch that would otherwise be mitigated.

[15] Tariff section 43A.4.1.1.

[16] Tariff section 43A.4.1.1.1. The resource may not propose – and will not be compensated based upon – an offer price higher than the price submitted in its bid in the competitive solicitation. *Id*.

[17] *See* tariff section 43A.4.1.1.2. The costs used to determine the current CPM soft offer cap were based on a cost of service study conducted by the California Energy Commission (CEC) in 2014. *See* transmittal letter for Tariff Amendment and Offer of Settlement Regarding

the reference resource are based on a California Energy Commission (CEC) generation cost study. The CEC study not only examines the costs of new generation in California, but it also assesses and captures data on the going-forward fixed costs (*i.e.,* ad valorem costs, insurance, and fixed O&M costs) associated with existing generation.

To account for changing conditions, the CAISO's tariff requires that the CAISO conduct a stakeholder process at least every four years to evaluate whether to update the level of the CPM soft offer cap.[18] The stakeholder process starts with the CEC's publication of a new draft of its Cost of Generation Study and Model (or similar cost study) that sets forth estimates for the levelized going-forward fixed costs of the reference resource.[19] The stakeholder process considers whether the CPM Soft Offer Cap adequately reflects 120 percent of the levelized going-forward fixed costs of the reference resource at the time of the stakeholder initiative. The final results of the CEC cost study serve as the basis for such assessment.[20]

The tariff does not require CAISO to update the CPM soft offer cap; it only requires the CAISO assess the existing price. Additionally, the tariff does not require the CAISO to reassess the tariff formula for calculating the CPM soft offer cap, including the specified reference resource or the 20 percent adder.[21]

C. Stakeholder Initiative

In May 2023, the CEC provided the CAISO with an update to its generation cost study, *Cost of Generation Model: Fixed Costs Study for CAISO's CPM Soft Offer Cap* (May 2023 Update).[22] Pursuant to CAISO tariff section

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Capacity Procurement Mechanism Revisions and Request for Waiver of Notice Requirement, Docket No. ER15-1783-000, at 15 (May 26, 2015). In 2019 and 2020, the CAISO conducted a stakeholder process to determine whether any changes to the soft offer cap were necessary based on a 2018 CEC cost of service study, but the CAISO determined that no changes were warranted at that time.

[18] Tariff Section 43.A.4.1.1.2.

[19] Tariff Section 43A.4.1.1.2. If the CEC has not issued a draft report within the 46-month period, then the CAISO must start the stakeholder process before the end of the four-year period. *Id*.

[20] Tariff Section 43A.4.1.1.2. If final results are not available for use in the stakeholder initiative, then the CAISO must use published draft results. If there are no final or draft CEC study results, then the CAISO must commission or administer a study of the levelized going-forward fixed costs of a mid-cost, merchant-constructed, 550 MW combined cycle unit with duct firing, or similar advanced combined cycle resource. *Id*.

[21] Tariff Section 43A.4.1.1.2.

[22] http://www.caiso.com/InitiativeDocuments/Presentation-Capacity-Procurement-Mechanism-Enhancements-May112023.pdf.

43A.4.1.1, the CAISO commenced its stakeholder initiative on May 11, 2023 by presenting the CEC cost study in a stakeholder workshop. The narrow scope of the initiative was limited to exploring whether the CEC cost study results warranted changes to the CPM soft offer cap. The CAISO issued a straw proposal on June 30, 2023 and a final proposal on August 17, 2023. The August 17, 2023 posting also included draft tariff language regarding the proposal in this tariff amendment filing, which the CAISO Board of Governors authorized on September 21, 2023. The CAISO held stakeholder calls on May 11, 2023 and July 10, 2023. The CAISO also provided stakeholders the opportunity to submit written comments on each of the posted documents.

Some stakeholders proposed fundamental changes to the CPM that go beyond the limited scope of this FPA Section 205 proceeding. The CAISO explained that it would consider broader reforms to the CPM in a separate stakeholder process. To that end, the CAISO has launched an RA modeling and program design working group, where the CAISO is actively working with stakeholders to prioritize reforms to RA rules and processes. One item this working group will discuss is the CAISO's backstop processes, including reforms to the CPM soft offer cap.[23]

II. Proposed Tariff Revisions

A. Soft Offer Cap

Based on the results of the CEC's May 2023 Update, the CAISO proposes a simple update to the CPM soft offer cap price. Table 1 below presents the results of the last three CEC generation cost studies, including the CEC's May 2023 Update.

[23] https://stakeholdercenter.caiso.com/StakeholderInitiatives/Resource-adequacy-modeling-and-program-design.

Table 1: Combined Cycle Levelized Going-Forward Fixed Costs, Summary of CEC Analyses

Soft Offer Cap Derivation	2014	2018	2023
Technology	CCGT	CCGT	CCGT
Capacity	550 MW	700 MW	550 MW
A. Insurance ($/kW-year)	$8.09	$7.10	$9.32
B. Ad Valorem ($/kW-year)	$11.74	$10.03	$13.14
C. Fixed O&M ($/kW-year)	$43.23	$41.77	$50.95
Sum (A,B,C)	**$63.06**	**$58.90**	**$73.41**
Multiplier	120%	120%	120%
SOC ($/kW-year)	**$75.67**	**$70.68**	**$88.09**
SOC ($/kW-month)	**$6.31**	**$5.89**	**$7.34**

To determine the three fixed cost outputs used to derive the soft offer cap (*i.e.,* ad valorem costs, insurance, and fixed O&M costs) in the May 2023 Update, the CEC updated the model start year, inflation figures, and labor rates. Table 1 demonstrates the levelized going-forward fixed costs for a 550 MW combined cycle with duct firing in 2023 is equal to $73.41/kw-year. To calculate the soft offer cap, the CAISO multiplied this figure by 120%. The result is $88.09/kw-year, or $7.34/kw-month. Accordingly, the current soft-offer cap of $6.31/kw-month does not adequately reflect 120% of the current levelized going-forward fixed costs of the reference resource. The CAISO proposes to increase the level of the soft-offer cap from $6.31/kw-month to $7.34/kw-month.[24]

This CPM soft offer cap proposed herein is just and reasonable and a necessary complement to the competitive solicitation processes. The proposed increase reflects inflation figures, labor rates, and higher bilateral capacity prices in recent years. Combined with the opportunity to make a resource-specific cost filing, the proposed soft offer cap is simultaneously high enough to ensure contributions to fixed cost recovery and low enough to provide appropriate market power mitigation. Finally, the updated soft offer cap will better position the CAISO to maintain reliable grid operations this summer and beyond by creating greater incentives for resources to accept voluntary CPM designations.

There is broad stakeholder support for the proposed soft offer cap price increase.

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24 Proposed Appendix A to the CAISO tariff.

B. Clarifications

The CAISO also proposes to remove language defining "CPM Soft Offer Cap" in section 43A.4.1.1 of the CAISO tariff. Because "CPM Soft Offer Cap" is already a defined term in Appendix A, the language is unnecessary.[25]

III. Effective Date(s)

It is important the CAISO implement the proposed tariff provisions by the start of summer 2024 when higher expected loads and tighter grid conditions may require backstop procurement. Accordingly, the CAISO respectfully requests the Commission issue an order by May 1, 2024, accepting the proposed tariff revisions to be effective in early June 2024. The CAISO intends to implement these tariff revisions by June 1, 2024. This tariff amendment results in a numerical update to the CAISO's resource adequacy system. A Commission order by May 1, 2024 will provide the CAISO and its market participants needed regulatory certainty before the planned implementation. The CAISO requests authorization to notify the Commission of the effective date of the tariff changes within five days of implementation.[26]

IV. Communications

Under Rule 203(b)(3),[27] the CAISO respectfully requests that all correspondence and other communications about this filing be served upon:

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Operator Corporation
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25 The CAISO also proposes a minor verbiage correction in Section 43A.4.1.1, revising "shall" to "will."

26 The CAISO has included an effective date of 12/31/9998 as part of the tariff records submitted in this filing. The CAISO will notify the Commission of the actual effective date of these tariff records within five business days of implementation in an eTariff submittal using Type of Filing code 150 – Report. *See Cal. Indep. Sys. Operator Corp.,* 172 FERC ¶ 61,263 (2020).

27 18 C.F.R. § 385.203(b)(3).

V. Service

The CAISO has served copies of this filing on the CPUC, the California Energy Commission, and all parties with scheduling coordinator agreements under the CAISO tariff. In addition, the CAISO has posted a copy of the filing on the CAISO website.

VI. Contents of this filing

Besides this transmittal letter, this filing includes these attachments:

Attachment A	Clean CAISO tariff sheets
Attachment B	Redlined CAISO tariff sheets
Attachment C	Final Proposal
Attachment D	Board of Governors Memo

VII. Conclusion

For the reasons set forth in this filing, the CAISO respectfully requests that the Commission accept the CAISO's proposed tariff revisions.

Respectfully submitted,

/s/ Marissa Nava

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Attachment A – Clean Tariff

Tariff Amendment – Capacity Procurement Mechanism Soft Offer Cap

California Independent System Operator Corporation

February 9, 2024

Section 43A

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43A.4.1.1 Price Component of a CSP Offer

Offers of capacity to a CSP shall contain a single price denoted in units of $/kW-month. The price offered into a CSP shall not be less than zero. Offer prices are subject to the CPM Soft Offer Cap. CPM Capacity will not be compensated by the CAISO.

at a rate higher than the CPM Soft Offer Cap unless a Resource Owner of Eligible Capacity makes the required resource-specific cost filing with FERC pursuant to Section 43A.4.1.1.1.

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Appendix A

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\- **CPM Soft Offer Cap**

A capacity price of $7.34/kW-month ($88.09/kW-year), as described in Section 43A.4.1.1.

Attachment B – Marked Tariff

Tariff Amendment – Capacity Procurement Mechanism Soft Offer Cap

California Independent System Operator Corporation

February 9, 2024

Section 43A

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43A.4.1.1 Price Component of a CSP Offer

Offers of capacity to a CSP shall contain a single price denoted in units of $/kW-month. The price offered into a CSP shall not be less than zero. Offer prices are subject to the CPM Soft Offer Cap ~~of $6.31/kW-month ($75.68/kW-year)~~. CPM Capacity will~~shall~~ not be compensated by the CAISO.

at a rate higher than the CPM Soft Offer Cap unless a Resource Owner of Eligible Capacity makes the required resource-specific cost filing with FERC pursuant to Section 43A.4.1.1.1.

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Appendix A

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- **CPM Soft Offer Cap**

A capacity price of $7.34~~6.31~~/kW-month ($88.09~~75.68~~/kW-year), as described in Section 43A.4.1.1.

Attachment C – Final Proposal

Tariff Amendment – Capacity Procurement Mechanism Soft Offer Cap

California Independent System Operator Corporation

February 9, 2024

California ISO

Capacity Procurement Mechanism Enhancements

Track 2 Final Proposal

August 17, 2023

Market Design & Analysis

Capacity Procurement Mechanism Enhancements
Track 2 Final Proposal

Table of Contents

1. Executive Summary

The California Independent System Operator (ISO) uses its capacity procurement mechanism (CPM) to address resource adequacy (RA) deficiencies and other potential reliability concerns. The ISO can use its CPM authority to address specific needs defined by the following six CPM designation types:[1]

1. Insufficient local capacity area resources in an annual or monthly RA plan
2. A collective deficiency in local capacity area resources
3. Insufficient RA resources in a load-serving entity's annual or monthly RA plan
4. A CPM significant event
5. A reliability or operational need for an exceptional dispatch CPM
6. A cumulative deficiency in the total flexible RA capacity included in the annual or monthly flexible RA capacity plans, or in a flexible capacity category in the monthly flexible RA capacity plans

When the ISO makes CPM designations, it relies on capacity willingly offered to the ISO by resource scheduling coordinators.[2] To attract such capacity, the ISO conducts annual, monthly and intra-monthly competitive solicitation processes, into which resource scheduling coordinators may offer their capacity to the ISO at prices up to a soft offer cap, currently set at \$6.31/kw-month.[3] Any offers above the soft offer cap must be cost-justified at FERC to recover up to a resource-specific cost of service rate.[4]

The CPM Enhancements stakeholder initiative consists of at least two tracks. Track 1 addressed CPM operational improvements, including changes to help the ISO take greater advantage of uncontracted capacity in a specific calendar month. The ISO Board of Governors approved the track 1 enhancements in March 2023.[5] In track 2, ISO staff propose to increase the CPM soft offer cap from \$6.31/kw-month to \$7.34/kw-month. This proposed increase is based on the following three justifications: (1) \$7.34/kw-month is a figure based on the ISO tariff-defined methodology for deriving the soft offer cap, using updated CEC-provided combined cycle going-forward fixed costs; (2) the ISO tariff-defined methodology for deriving the CPM soft offer cap is still reasonable and relevant until a broader relook of the ISO's RA processes can be completed; (3) the proposed increase to the soft offer cap accounts for recent inflation and is directionally appropriate, given the increase in bilateral capacity prices over recent years. ISO staff plan to bring track 2 to the ISO Board of Governors for a decision in September 2023. As part of a

[1] ISO tariff section 43A.2
http://www.caiso.com/Documents/Section43A-CapacityProcurementMechanism-asof-Apr22-2022.pdf

[2] For more detail, please refer to ISO tariff section 43A.4.2 and section 5 of the Reliability Requirements business practice manual.

[3] ISO tariff section 43A.4.1.1
http://www.caiso.com/Documents/Section43A-CapacityProcurementMechanism-asof-Apr22-2022.pdf

[4] ISO tariff section 43A.4.1.1.1
http://www.caiso.com/Documents/Section43A-CapacityProcurementMechanism-asof-Apr22-2022.pdf

[5] ISO Board of Governors General Session: Decision on CPM Enhancements – Track 1 (3/23/23)
DecisiononCapacityProcurementMechanismEnhancements-Track1-BoardMotion-Mar2023.pdf (caiso.com)

broader RA initiative, ISO staff will work with stakeholders on identifying potential reforms to the ISO's backstop RA processes, including potential changes to the structure of the soft offer cap and/or soft offer cap derivation methodology. The timing of this future CPM policy work will be decided in concert with stakeholder input in RA working groups, which are anticipated to meet later in 2023.

2. Stakeholder Initiative Schedule

The CAISO has adopted the following schedule for track 2 of the CPM enhancements stakeholder initiative:

Table 1: *CPM Enhancements Track 2 Stakeholder Initiative Schedule*

Date	Track 1 Milestone
April 27, 2023	CPM enhancements track 2 announced via market notice
May 11, 2023	Stakeholder workshop
June 1, 2023	Due date for stakeholder comments on workshop
June 30, 2023	Publish straw proposal
July 10, 2023	Stakeholder call on straw proposal
July 24, 2023	Due date for stakeholder comments on straw proposal
August 17, 2023	Publish final proposal and draft tariff language
August 31, 2023	Due date for stakeholder comments on draft tariff language
September 21, 2023	Board of Governors presentation

3. Background on CPM

The ISO uses its CPM authority to address RA deficiencies and other potential reliability concerns. The ISO's use of its CPM authority is often referred to as "backstop" procurement. The ISO's backstop procurement authority also includes reliability must-run (RMR) contracts, which the ISO uses to retain resources that would otherwise retire but the ISO determines are needed to maintain reliable grid operations based on the results of technical studies and analyses.[6] The ISO can use its CPM authority to procure capacity that is not committed RA capacity or RMR capacity to address specific needs defined by the six CPM designation types listed in Table 2. The ISO does not use RMR authority to backstop RA deficiencies.

[6] ISO tariff section 41 http://www.caiso.com/Documents/Section41-Procurement-RMRResources-asof-Sep28-2019.pdf

Table 2: *CPM Designation Types*[7]

#	CPM Designation Type
1	Insufficient local capacity area resources in an annual or monthly RA plan
2	A collective deficiency in local capacity area resources
3	Insufficient RA resources in an LSE's annual or monthly RA plan
4	A CPM significant event
5	A reliability or operational need for an exceptional dispatch CPM
6	A cumulative deficiency in the total flexible RA capacity included in the annual or monthly flexible RA capacity plans, or in a flexible capacity category in the monthly flexible RA capacity plans

When the ISO needs to make CPM designations, it relies on capacity voluntarily offered to the ISO by resource scheduling coordinators.[8] The ISO conducts annual, monthly and intra-monthly competitive solicitation processes, in which resource scheduling coordinators may offer their capacity to the ISO at prices up to a soft offer cap, currently set at $6.31/kw-month.[9] Any offers above the soft offer cap must be cost-justified at FERC to recover up to a resource-specific cost of service rate.[10]

Resource scheduling coordinators submit offers through the ISO's customer interface for resource adequacy (CIRA) application. The ISO's submission window requires offers to be submitted prior to any announcement of whether capacity might be needed by the ISO for a CPM designation. After offers are submitted and the adjustment window is closed, the ISO validates the offers to ensure the capacity is not shown as RA in CIRA. If there is a CPM need, the ISO will then select resources that meet the designation criteria at the lowest total cost. If there are insufficient offers, the ISO can offer CPM designations at the soft offer cap to capacity not offered into the competitive solicitation process. CPM resources have a must offer obligation and are subject to the RA Availability Incentive Mechanism (RAAIM).[11]

[7] ISO tariff section 43A.2
http://www.caiso.com/Documents/Section43A-CapacityProcurementMechanism-asof-Apr22-2022.pdf

[8] For more detail, please refer to ISO tariff section 43A.4.2 and section 5 of the Reliability Requirements business practice manual

[9] ISO tariff section 43A.4.1.1
http://www.caiso.com/Documents/Section43A-CapacityProcurementMechanism-asof-Apr22-2022.pdf

[10] ISO tariff section 43A.4.1.1.1
http://www.caiso.com/Documents/Section43A-CapacityProcurementMechanism-asof-Apr22-2022.pdf

[11] It is also worth noting that the calculation of RAAIM non-availability charges is dependent on the CPM soft offer cap. More specifically, the RAAIM price is equal to 60% of the CPM soft offer cap.

ISO tariff section 40.9
http://www.caiso.com/Documents/Section40-RADemonstration-for-SchedulingCoordinatorsintheCAISOBalancingAuthorityArea-asof-May28-2023.pdf

The ISO set the existing soft offer cap of $6.31/kw-month during its capacity procurement mechanism replacement stakeholder initiative, which was conducted in 2014-2015.[12] The $6.31/kw-month soft offer cap equals 120% x the levelized going-forward fixed costs of a of a merchant constructed, mid-cost, 550 MW combined cycle unit with duct firing, as published by the California Energy Commission (CEC) in March 2015.[13] The levelized going-forward fixed costs were comprised of three elements: (1) fixed operations and maintenance costs; (2) ad valorem taxes; (3) insurance.

The ISO has a tariff obligation to open a stakeholder initiative every four years (at the latest) to examine the soft offer cap and consider whether it needs to be changed. The ISO tariff requires the stakeholder process to consider whether the soft offer cap adequately reflects 120% of the levelized going-forward fixed costs of the reference resource, where the reference resource is defined as a merchant-constructed mid-cost 550 MW combined cycle with duct firing or similar advanced combined cycle resource.[14] In its capacity procurement mechanism soft offer cap stakeholder initiative, the ISO met that tariff obligation by considering updated combined cycle fixed costs published by the CEC in May 2019.[15] In track 2 of this CPM enhancements stakeholder initiative and in accordance with its tariff obligation, the ISO is re-examining the soft offer cap and considering whether an update needs to be made.

As mentioned above, resource scheduling coordinators may offer their capacity to the ISO at prices above the soft offer cap, but they must cost-justify such offers at FERC based on resource-specific going forward fixed costs, *i.e.,* fixed operation and maintenance costs, ad valorem taxes and insurance. There are two important differences between the calculation of the above-cap cost of service rate and derivation of the soft offer cap: a.) the cost of service rate is based on <u>resource-specific</u> inputs, whereas the soft offer cap is based on a <u>generic</u> 550 MW advanced combined cycle resource with duct firing; and b.) the cost of service rate calculation does <u>not</u> include a 20% adder, whereas the soft offer cap derivation <u>does</u> include a 20% adder. These differences were reflected in a May 2022 compliance filing that the ISO submitted to FERC, finalizing the above-cap cost of service rate calculation methodology.[16]

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[12] ISO's Capacity Procurement Mechanism Replacement stakeholder initiative:
http://www.caiso.com/Pages/documentsbygroup.aspx?GroupID=bfe609ff-a9a1-4828-bf01-51a495bef7e2

[13] Estimated Cost of New Renewable and Fossil Generation in California, CEC, March 2015
https://web.archive.org/web/20190601182649/https://www.energy.ca.gov/2014publications/CEC-200-2014-003/index.html

[14] ISO tariff section 43A.4.1.1.2
http://www.caiso.com/Documents/Section43A-CapacityProcurementMechanism-asof-Apr22-2022.pdf

[15] ISO's Capacity Procurement Mechanism Soft Offer Cap stakeholder initiative:
https://stakeholdercenter.caiso.com/StakeholderInitiatives/Capacity-procurement-mechanism-soft-offer-cap

Estimated Cost of New Utility-Scale Generation in California: 2018 Update, CEC, May 2019
https://www.energy.ca.gov/sites/default/files/2021-06/CEC-200-2019-005.pdf

[16] Docket ER20-1075, ISO compliance filing to FERC, 5/23/22
https://www.caiso.com/Documents/May23-2022-ComplianceFiling-CapacityProcurementMechanism-CPM-above-SoftOfferCap-ER20-1075.pdf

4. CEC Cost of Generation Model: May 2023 Update

At the CPM enhancements track 2 stakeholder workshop hosted by the ISO in May 2023, the CEC presented updated combined cycle going-forward fixed costs. More specifically, the CEC provided updates to its 2018/2019 levelized going-forward fixed costs for a 550 MW combined cycle with duct firing. As instructed by the ISO tariff, the CEC provided updates to the three specific going-forward fixed cost components that are needed to derive the ISO's CPM soft offer cap: (1) insurance; (2) ad valorem taxes; (3) fixed operations and maintenance (O&M). In order to update these three going-forward fixed cost components, the CEC incorporated a 2023 start year into its cost of generation model and accounted for updated labor rates and inflation figures. The May 2023 CEC-provided going-forward fixed costs are shown below in table 3. As shown in table 3, the levelized going-forward fixed costs for a 550 MW combined cycle with duct firing is equal to $73.41/kw-year.

Table 3: *Combined Cycle Levelized Going-Forward Fixed Costs, CEC, May 2023 Update*[17]

Version (Start Year)	Capacity	Insurance	Ad Valorem Taxes	Fixed O&M	Total
2018 (2023)	550 MW	$9.32/kw-year	$13.14/kw-year	$50.95/kw-year	$73.41/kw-year

Based on the CEC's May 2023 update, the levelized going-forward fixed costs for a 550 MW combined cycle with duct firing equals $73.41/kw-year. Under the ISO tariff, the derivation of the soft offer cap requires this figure to be multiplied by 120%. The result is $88.09/kw-year, or $7.34/kw-month.

5. Stakeholder Comments

ISO staff appreciate the diversity of perspectives provided by stakeholders over the past few months, and most recently in comments submitted on July 24, 2023. From these verbal and written comments, ISO staff have identified two key themes:

1. <u>Questions about the CEC's 2023 update to combined cycle going-forward fixed costs</u>

   In their comments, several stakeholders asked the ISO and CEC to provide more information about the CEC's May 2023 update to the combined cycle going-forward fixed costs. In response to these stakeholder requests, the CEC provided an updated presentation. The updated CEC presentation, which is embedded within the ISO's stakeholder workshop presentation, now includes information about specific aspects of the combined cycle going-forward fixed costs that the CEC updated in 2023 and the data sources for those updates.[18] The CEC presentation

[17] CEC Cost of Generation Model: Fixed Costs Study for CAISO's CPM Soft Offer Cap, May 2023 Presentation-Capacity-Procurement-Mechanism-Enhancements-May112023.pdf (caiso.com)

[18] CEC Cost of Generation Model: Fixed Costs Study for CAISO's CPM Soft Offer Cap, May 2023 Presentation-Capacity-Procurement-Mechanism-Enhancements-May112023.pdf (caiso.com)

also includes information about the specific aspects of the combined cycle going-forward fixed costs that have not been updated. For example, the non-labor portion of fixed O&M costs was held constant in real dollars (inflation still applied), which is a reasonable approach given the mature nature of combined cycle technology. For more detail on the CEC's underlying cost of generation model, stakeholders should refer to the CEC's full report on the estimated cost of generation, published in May 2019.[19]

2. Ideas for the next phase of CPM-related policy work

In their comments, several stakeholders asked the ISO to explore changes to the derivation and/or structure of the soft offer cap. For example, stakeholders asked the ISO to consider deriving the soft offer cap using costs from resources other than combined cycles. More specifically, stakeholders suggested examining the costs of energy storage resources, geothermal resources, gas peakers and imports. Furthermore, stakeholders have requested that the ISO facilitate a discussion on the merits of using a net cost of new entry (net CONE) instead of using going-forward fixed costs. On a related note, stakeholders have requested a discussion on whether the reference resource should be a marginal new resource or a marginal existing resource. In addition, stakeholders asked the ISO to consider incorporating opportunity costs into the soft offer cap, which would likely result in a dynamic soft offer cap. Stakeholders also asked the ISO to explore whether the soft offer cap could be differentiated by month or season, instead of a flat soft offer cap that applies equally across all months.

Beyond changes to the derivation and/or structure of the soft offer cap, stakeholders have requested that the ISO explore and/or discuss the following: (1) changes to the FERC formula rate for a cost recovery filing above the soft offer cap as detailed in ISO tariff section 43A.4.1.1.1; (2) making CPM designations mandatory instead of discretionary; (3) CPM designations if ISO load-serving entities, collectively or individually, do not procure sufficient capacity to satisfy RA needs in all hours of the day, once the California Public Utilities Commission RA program transitions to its slice-of-day framework.

ISO staff are encouraged by these ideas to enhance the derivation and/or structure of the soft offer cap and explore CPM-related changes beyond the soft offer cap. As mentioned during the May 11, 2023 stakeholder workshop and again during the July 10, 20223 stakeholder call, the scope of this CPM enhancements track 2 is limited and cannot accommodate changes beyond a straight-forward tariff-driven update to the soft offer cap. However, ISO staff is committed to working with stakeholders on broader reforms to the ISO's CPM, including potential changes to the structure of the soft offer cap and/or soft offer cap derivation methodology. This future

[19] Estimated Cost of New Utility-Scale Generation in California: 2018 Update, CEC, May 2019 https://www.energy.ca.gov/sites/default/files/2021-06/CEC-200-2019-005.pdf

phase of CPM policy work will begin in 2024 – either as CPM enhancements track 3, or as part of the upcoming RA enhancements initiative.

6. Straw Proposal

In this CPM enhancements track 2 initiative, ISO staff propose a straight-forward, ISO tariff-driven increase to the CPM soft offer cap using the CEC's 2023 calculation of the levelized going-forward fixed costs of a 550 MW combined cycle with duct firing. More specifically, ISO staff propose to increase the CPM soft offer cap from $6.31/kw-month to **$7.34/kw-month**. Table 4 below shows the CEC's 2023 calculation of the soft offer cap, and how the inputs compare to previous CEC calculations over the past 10 years.

Table 4: *Combined Cycle Levelized Going-Forward Fixed Costs, Summary of CEC Analyses*[20]

Soft Offer Cap Derivation	2014	2018	2023
Technology	CCGT	CCGT	CCGT
Capacity	550 MW	700 MW	550 MW
A. Insurance ($/kw-year)	$8.09	$7.10	$9.32
B. Ad Valorem ($/kw-year)	$11.74	$10.03	$13.14
C. Fixed O&M ($/kw-year)	$43.23	$41.77	$50.95
Sum (A,B,C)	$63.06	$58.90	$73.41
Multiplier	120%	120%	120%
Soft Offer Cap ($/kw-year)	$75.67	$70.68	$88.09
Soft Offer Cap ($/kw-month)	**$6.31**	**$5.89**	**$7.34**

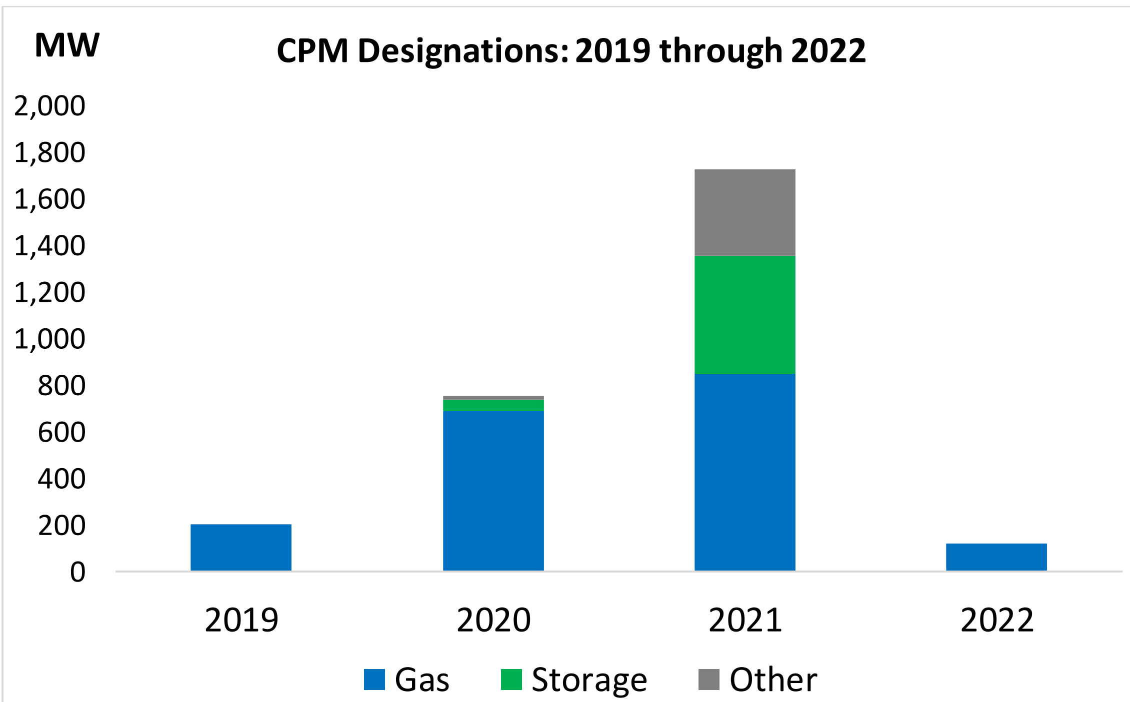
As explained in the background section above, the ISO has a tariff obligation to examine the soft offer cap every four years (at the latest) and consider whether the soft offer cap adequately reflects 120% of the levelized going-forward fixed costs of a merchant-constructed mid-cost 550 MW combined cycle with duct firing or similar advanced combined cycle resource. As shown in table 4 above, the current soft offer cap of $6.31/kw-month does <u>not</u> adequately reflect 120% of the current levelized going-forward fixed costs of a 550 MW combined cycle with duct firing. As shown in table 4, the soft offer cap should be increased to 120% x 73.41/kw-year = $88.09/kw-year = $7.34/kw-month. This would be approximately a 16% increase in the level of the soft offer cap. Increasing the soft-offer cap is directionally consistent with the increase in bilateral capacity prices in recent years, and it recognizes the effects of recent inflation.

[20] CEC Cost of Generation Model: Fixed Costs Study for CAISO's CPM Soft Offer Cap, May 2023 [Presentation-Capacity-Procurement-Mechanism-Enhancements-May112023.pdf (caiso.com)]

The ISO believes the tariff-defined methodology for deriving the CPM soft offer cap is still reasonable and relevant:

- The tariff-defined methodology uses going-forward fixed costs and a 120% multiplier and thus provides meaningful contributions to fixed cost recovery for resources
- Using a gas-fired reference resource is still appropriate. As shown in figure 1 below, the ISO has made a total of 2,803 MW of CPM designations over the last four years. Of this 2,803 MW total, 1,857 MW (66%) have been for gas-fired resources. Of the 1,857 MW of CPM designations for gas-fired resources, 69% were specifically for combined cycle resources, and the remaining 31% were for frame combustion turbines, aeroderivative combustion turbines and reciprocating engines.

Figure 1: *ISO CPM Designations: 2019 - 2022*



7. EIM Governing Body Role

CAISO staff believe that the WEIM Governing Body does not have a role in the decision about this initiative. The Board and the WEIM Governing Body have joint authority over any proposal to change or establish any CAISO tariff rule(s) applicable to the EIM Entity balancing authority areas, EIM Entities, or other market participants within the EIM Entity balancing authority areas, in their capacity as participants in EIM. This scope excludes from joint authority, without limitation, any proposals to change or establish tariff rule(s) applicable only to the CAISO balancing authority area or to the CAISO-controlled grid. Charter for EIM Governance § 2.2.1. None of the tariff rule changes currently contemplated in this initiative would be "applicable to EIM Entity balancing authority areas, EIM Entities, or other market participants within EIM Entity balancing authority areas, in their capacity as participants in EIM." Rather, the proposed tariff rules would be applicable "only to the CAISO balancing authority area or to the CAISO-controlled grid." Accordingly, the matters scheduled for decision fall outside the scope of joint authority.

Although the "EIM Governing Body may provide advisory input over proposals to change or establish tariff rules that would apply to the real-time market but are not within the scope of joint authority," no aspects of this initiative would apply to the real time market. Accordingly, this initiative falls outside of the WEIM Governing Body's advisory role as well.

Stakeholders are encouraged to submit a response in their written comments to the proposed classification of as described above, particularly if they have concerns or questions.

8. Next Steps

Please refer to the draft tariff language, which has been included below within this pdf file. Written stakeholder comments on the draft tariff language are due by 5pm (PST) on August 31, 2023.

Attachment D – Board Memoranda

Tariff Amendment – Capacity Procurement Mechanism Soft Offer Cap

California Independent System Operator Corporation

February 9, 2024

Memorandum

To: ISO Board of Governors

From: Anna McKenna, Vice President Market Design and Analysis

Date: September 13, 2023

Re: **Decision on Capacity Procurement Mechanism Enhancements Track 2**

This memorandum requires ISO Board of Governors action.

EXECUTIVE SUMMARY

The California Independent System Operator (ISO) uses its capacity procurement mechanism (CPM) to address resource adequacy (RA) deficiencies and other potential reliability concerns. When the ISO makes CPM designations, it relies on capacity willingly offered to the ISO by resource scheduling coordinators. To procure such capacity, the ISO conducts annual, monthly and intra-monthly competitive solicitation processes, into which resource scheduling coordinators may offer their capacity to the ISO at prices up to a soft offer cap, currently set at $6.31/kw-month. Any offers above the soft offer cap must be cost-justified at FERC to recover up to a resource-specific cost of service rate.

As required by the tariff, the ISO undertakes a stakeholder initiative to reevaluate the soft offer cap at least every four years. The recently completed review of the CPM soft offer cap was conducted through track 2 of the phased CPM enhancements stakeholder initiative. A holistic reevaluation of the ISO's backstop measures, including CPM, is anticipated as a part of the ISO's upcoming resource adequacy working group process and subsequent initiatives. However, as part of this limited effort, Management recommends simply to increase the CPM soft offer cap from $6.31/kw-month to $7.34/kw-month until broader comprehensive reforms can be vetted.

> ***Moved, that the ISO Board of Governors approve the revision to the Capacity Procurement Mechanism soft offer cap as described in this memorandum dated September 13, 2023; and***
>
> ***Moved, that the ISO Board of Governors authorize Management to make all necessary and appropriate filings with the Federal Energy Regulatory Commission to implement the change proposed in this memorandum, including any filings that implement the overarching initiative policy but***

contain discrete revisions to incorporate Commission guidance in any initial ruling on the proposed tariff amendment.

DISCUSSION AND ANALYSIS

The ISO uses its CPM authority to address RA deficiencies and other potential reliability concerns. The ISO's use of its CPM authority is often referred to as "backstop" procurement. The ISO's backstop procurement authority also includes reliability must-run (RMR) contracts, which the ISO uses to retain resources that would otherwise retire but the ISO determines are needed to maintain reliable grid operations based on the results of technical studies and analyses. The ISO can use its CPM authority to procure capacity that is not committed RA capacity or RMR capacity to address specific reliability needs.

When the ISO makes CPM designations, it relies on capacity willingly offered to the ISO by resource scheduling coordinators. To procure such capacity, the ISO conducts annual, monthly and intra-monthly competitive solicitation processes, into which resource scheduling coordinators may offer their capacity to the ISO at prices up to a soft offer cap, currently set at $6.31/kw-month. Any offers above the soft offer cap must be cost-justified at FERC to recover up to a resource-specific cost of service rate.

The ISO set the existing soft offer cap of $6.31/kw-month during its CPM replacement stakeholder initiative, which was conducted in 2014-2015. The $6.31/kw-month soft offer cap equals 120% times the levelized going-forward fixed costs of a merchant-constructed, mid-cost, 550 MW combined cycle unit with duct firing, as published by the California Energy Commission (CEC) in March 2015.

The ISO has a tariff obligation to conduct a stakeholder initiative every four years (at the latest) to examine the soft offer cap and consider whether it needs to be changed. In its previous CPM soft offer cap stakeholder initiative, the ISO met that tariff obligation by considering updated combined cycle fixed costs published by the CEC in May 2019. The updated fixed costs did not significantly change from those that were published by the CEC in March 2015. Accordingly, the ISO determined that changes to the CPM soft offer cap level were unwarranted. In track 2 of this CPM enhancements stakeholder initiative and in accordance with its tariff obligation, the ISO has again re-examined the soft offer cap and considered the need for an update.

Pursuant to that re-examination and in collaboration with stakeholders, Management's recommendation is to raise the CPM soft offer cap from $6.31/kw-month to $7.34/kw-month. The recommendation is based on the following three justifications: (1) $7.34/kw-month is a figure based on the tariff-defined methodology for deriving the soft offer cap, using updated CEC-provided combined cycle going-forward fixed costs; (2) the tariff-defined methodology for deriving the CPM soft offer cap is still reasonable and relevant until a broader reevaluation of the ISO's RA processes can be completed[1]; and (3) the

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[1] Management believes that using a gas-fired reference resource is still reasonable at this time, given that 66% of the CPM designations made by the ISO from 2019 through 2022 were to gas-fired resources.

proposed increase to the soft offer cap accounts for recent inflation and is directionally appropriate, given the increase in bilateral capacity prices over recent years.

POSITIONS OF THE PARTIES

Management appreciates the diversity of perspectives provided by stakeholders over the past few months, and most recently in comments submitted on July 24, 2023.

Questions about the CEC's 2023 update to combined cycle going-forward fixed costs

In their comments, several stakeholders asked the ISO and CEC to provide more information about the CEC's May 2023 update to the combined cycle going-forward fixed costs. In response to these stakeholder requests, the CEC provided an updated presentation, which includes information about specific aspects of the combined cycle going-forward fixed costs that the CEC updated in 2023. This updated information is embedded within the ISO's stakeholder workshop presentation[2].

Ideas for the next phase of CPM-related policy work

Several stakeholders asked the ISO to explore changes to the derivation and/or structure of the soft offer cap, as well as to broader programmatic changes to the CPM. Management is encouraged by the ideas to enhance the derivation and/or structure of the soft offer cap and explore CPM-related changes beyond the soft offer cap.

The scope of this CPM enhancements track 2 initiative is limited and cannot accommodate changes beyond a straight-forward tariff-driven update to the soft offer cap. However, Management is committed to explore with stakeholders broader reforms to the ISO's backstop processes, including potential changes to the structure of the soft offer cap and/or soft offer cap derivation methodology. For example, in the derivation of the soft offer cap, Management might consider using costs from resources other than combined cycles or incorporating opportunity costs. The timing of this future CPM policy work will be decided in concert with stakeholder input in RA working groups, which are anticipated to meet later in 2023.

CONCLUSION

Based on the tariff-defined methodology for deriving the soft offer cap using updated CEC-provided combined cycle going-forward fixed costs, Management recommends that the CPM soft offer cap be adjusted upward to $7.34/kw-month, as set forth in this memorandum.

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[2] http://www.caiso.com/InitiativeDocuments/Presentation-Capacity-Procurement-Mechanism-Enhancements-Track%202-Jul102023.pptx